

GIS application in the study of Liassic Aquifere of Saïa

F. Amraoui¹, L. Bouchaou², H. Rhinane¹, and F. Sami¹

¹ Laboratoire Géosciences, équipe Hydrosociences, Université Hassan II Ain Chock, Faculté des Sciences, BP 5366 Maarif, Casablanca, Maroc

² Laboratoire de Géologie et de Géo-environnement, Faculté des Sciences Ibn Zohr, BP 28/5, 80000 Agadir, Maroc

The karstic aquifers constitute in the Mediterranean basin an essential water resource for domestic drinking and/or irrigation. The object of this study is to approach the very complex hydrodynamic of the carbonate aquifer of Liassic, in order to more understand the global functioning of the system. This knowledge is an essential importance for a quantitative and qualitative of water resources management which becomes urgency in a context of prolonged dryness and arid climate.

The hydrodynamic of the liassic aquifer of Saïa is analyzed using the hydrogeological data base, in particular the data of several deep boreholes drilled in the studied area. A geographical information system (SIG) was carried out for this aquifer of 2100 km² geographical extension playing an important role drinking water supply of the two big cities of Meknès and Fès (2 million inhabitants). The SIG seems performante tool to provide information on geometry and structure of the aquifer. The all data allows to establish the multiple hydrodynamic maps which can improve considerably knowledge on functioning of this aquifer system and can help the decision-makers to more manage the water resources in this area.

Key words : Plain of Saïa, Liassic aquifer, GIS, Hydrodynamics.